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ABSTRACT

This study investigated the effect of a competitive football season on the personality dimensions of high school varsity football team players (N=50) Personality data were collected using the Cattell 16 P.F. Questionnaire. Each player was ranked according to general football ability on the basis of a coach's rating. The t-test was used to compare a) the initial and final sten scores of the total group, b) the high- and low-ability groups (N=12 each) initially and finally, and c) the initial and final sten scores of the high and low groups. It found that a) when the total group was compared initially and finally, no significant differences were observed; b) at pre-season testing the high- and low-ability groups differed significantly on factors relating to maturity and trustfulness; c) at post-season testing the high and low groups differed significantly between initial and final testing on the same factor suggesting the observed personality modification was restricted to the high group; and e) no significant differences existed between the pre- and post-scores of the low-ability group on any of the 16 personality factors. It was concluded that the personality of high-ability varsity football players may undergo subtle modifications during a competitive football season while the low-ability players appear unaffected in terms of personality modifications. (Author)

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THE EFFECT OF A FOOTBALL SEASON ON THE PERSONALITY OF HIGH SCHOOL ATHLETES*

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INTRODUCTION

Man's concern for understanding and assessing personality has ancient origins. Initially, intuitive methods were used for the informal assessment of personality. Pre-Biblical approaches such as astrology and palmistry are still practiced to some extent today, but are questionable as acceptable scientific procedures. Modern personality measurement is based on assumptions that are congruent with scientific methodology and possess, to some degree, validity and reliability (7).

Personality has been defined in many ways (6,8,9,10,20). Regardless of the different definitions of personality, it is influenced by both heredity and environmental experiences. In athletics an individual's personality might very well determine his choice of activity as well as his accomplishments. Athletes participating in specific sports have been contrasted with non-athletes in terms of personality (1,2,17,18,19,21,22). It may be argued that participants vary in personality depending on which sport they pursue, and even within a given

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sport highly successful athletes may be distinguished from lower ability athletes (3,4,5,11,12,13,14,15,16). A further consideration in the area of personality and sport is the possible personality modifications which occur within a person or a result of his experiences through participation in physical activity in a given sport (23). With this latter consideration in mind, this study was designed to investigate the effect of a competitive football season on the personality of high school football players.

PURPOSE

The purpose of the study was to investigate the effect of a competitive football season on the personality dimensions of the varsity football team players of Central Catholic High School using Cattell's 16 P.F. Questionnaire (7).

METHOD

The variables used in the study were the average of the coaches' ratings and Cattell's 16 personality factors.

The coaches' rating consisted of a professional assessment of the players' general football ability and was conducted after the last football game of the season.

Personality dimensions were measured using Cattell's 16 P.F. Questionnaire (7) and data on all sixteen factors were obtained.

The data were obtained from 50 male students attending Central Catholic High School, Lafayette, Indiana, who were members of the 1971 varsity football team. The football season extended from August 12 to November 5. The subjects' ages ranged from 15 to 18 years and participation for the entire football season was

considered essential for inclusion in the study. All subjects were declared medically fit.

The coaches' ratings were conducted by the Central Catholic High School varsity football coaching staff. Each player was ranked according to general football ability displayed throughout the football season. Players with a low numerical rank were considered high in general football ability, while players with a high numerical rank were deemed low in general football ability.

The Cattell 16 P.F. Questionnaire-Form A was distributed to the subjects during the first week of practice and after the final scheduled football game. The subjects were permitted to complete the questionnaire in their own time. Fifty-three questionnaires were initially completed, but only fifty remained on the team throughout the football season. These fifty were retested using the same form of the questionnaire.

The subjects were given adequate instructions regarding completion of the questionnaires. They were not told the purpose of the retest nor were they informed that it was the same test.

The t-test was used to compare: (a) the initial and final sten scores of the total group, (b) the high and low ability groups initially and finally, and also (c) the initial and final sten scores of each group.

RESULTS

t-test Between Pre and Post Football Season

Personality Data - Total Group

The means, standard errors, and t-values are presented in Table 1. It would appear that there was no significant difference between the initial and final mean personality sten scores of the total group.

t-test Between Personality Factors of the High and Low Ability Groups - Pre Season

The established high and low ability groups, representing the top and bottom 25 per cent of the subjects based on the coaches' rating, were compared with respect to the 16 personality factors. The means, standard errors, and t-values are presented in Table 2.

The pre season analysis revealed that the ability groups differed significantly on two personality factors, namely, factor C - unstable and emotional versus mature and calm, and factor L - trustful and adaptable versus suspecting and jealous. The t-values of -2.87 on factor C and 2.53 on factor L were significant at the .01 and .05 levels, respectively. The group means on factor C tend to suggest that the high ability group moved toward expressions of emotionality, instability and low ego strength, while the low ability group conformed to the test score norm. The group means on factor L revealed the low ability group, as with factor C, conformed to the test score norm.

t-test Between the Personality Factors of the High and Low Ability Groups - Post Season

The post season means, standard errors, and t-values of the high and low ability groups are presented in Table 3.

A significant difference was observed between groups with respect to one personality factor, namely, factor I - tough and realistic versus sensitive and effeminate. The mean scores indicated that the high ability group with a mean sten score of 3.83 was significantly more tough and realistic than the low ability group, the latter conforming to the test score norm.

t-test Between the Pre and Post Season Personality Factors - High Ability Group

The means, standard errors, and t-values for the pre and post personality factors of the high ability group appear in Table 4. Factor I was found to be significant at the .05 level suggesting that, as the season progressed, the high ability group became significantly more tough and realistic. It should be noted that the high group with an initial mean sten score of 4.75 commenced the season with a tendency in this direction as indicated by the final mean sten score of 3.83.

t-test Between the Pre and Post Season Personality Factors - Low Ability Group

In Table 5 are presented the means, standard errors, and t-values for the low ability group - pre and post season.

No significant differences were found between the initial and final means for the low ability group on any of the 16 personality factors. This would appear to indicate that the low ability group underwent no significant personality modifications between the onset and conclusion of the football season.

DISCUSSION

The results of the t-tests comparing the total group (Table 1) between the pre and post season revealed that there was no significant difference on any factor.

When the high and low ability groups were compared initially (Table 2), factors C and L were found to be significant, suggesting that the high ability group tended to be emotional and jealous, while the low ability group remained

within the test score norm. The extreme manifestation of emotion and jealousy by the high ability group may have been due to the acute competition for a starting position on the football team. In contrast, it may be argued that the low ability players realized their position as 'bench-warmers' but were content with being members of the team and having team association.

When these same high and low ability groups were compared at the conclusion of the season (Table 3), they were found to differ significantly on one personality factor, namely, Factor I suggesting that at the end of the season the high ability football players were more tough and realistic, while the low ability players, as in the pre season, showed no significant departure from the norm. In terms of winning and losing these traits may be desirable attributes in an athlete. It is the opinion of the authors that such personality characteristics were stressed and fostered by the coaching staff throughout the season. Since the high ability athletes received preferential attention from the coaches it may be argued that they became psychologically as well as physically 'conditioned' to exhibit aggressive characteristics.

When the initial and final mean personality sten scores of the high ability group were compared (Table 4), factor I was found to be significant suggesting that as the football season progressed the high ability football players became more tough and realistic. As indicated above, factor I was also found to be significant when the high ability group was compared to the low ability group at the end of the season. From a football coaching standpoint, what may be called the 'toughness factor' - being 'gutty' and 'hard-nosed,' generally is considered a valuable asset for any football player given that he possesses size, speed, quickenss and the other role specific physical attributes. However, these

factors are minimized if the player is not psychologically predisposed toward toughness, aggression, and the thrive for bodily contact.

The low ability group (Table 5) showed no significant modifications between the pre and post testing and on both occasions conformed to the test score norm suggesting that they reflect the personality characteristics of the normal school population.

The above results tend to indicate that the high ability group underwent some personality modifications during the course of the football season. In contrast, the low ability group scarcely deviated from the test score norm on most personality factors. While it is possible that subtle personality modifications occur among high ability athletes during a football season it is unclear whether such modifications are permanent or purely adaptive behavior to the demands of the game and the coaches.

CONCLUSIONS

Within the limits of this study it may be concluded that:

1. The personality of high ability high school varsity football players may undergo subtle modifications during a competitive football season.

2. Low ability football players appear unaffected by a competitive football season in terms of personality modifications.

TABLE 1

t-TEST BETWEEN THE PRE AND POST PERSONALITY FACTORS - TOTAL GROUP

	Variable	Pre Test (n=50)		Post Test (n=50)		
		Mean	S. Error	Mean	S. Error	t
1.	A	5.12	.19	4.92	.20	.73
2.	B	5.04	.29	5.22	.33	-.41
3.	C	4.44	.22	4.74	.24	-.92
4.	E	5.54	.24	5.76	.22	-.67
5.	F	5.22	.26	5.66	.28	-1.14
6.	G	4.32	.22	4.28	.20	.13
7.	H	5.66	.22	5.82	.21	-.52
8.	I	4.70	.22	4.20	.24	1.56
9.	L	6.30	.21	6.24	.22	.20
10.	M	4.30	.22	4.92	.25	-1.87
11.	N	5.98	.22	5.70	.21	.91
12.	O	6.14	.22	6.30	.28	-.45
13.	Q_1	5.00	.21	5.10	.21	-.33
14.	Q_2	5.40	.24	5.38	.24	.06
15.	Q_3	5.08	.22	5.10	.21	-.07
16.	Q_4	6.56	.20	6.08	.26	1.46

** Significant at the .01 level.

* Significant at the .05 level.

TABLE 2

t-TEST BETWEEN THE PERSONALITY FACTORS OF THE HIGH AND LOW ABILITY GROUPS - PRE SEASON

	Variable	High Group (n=12) Mean	S. Error	Low Group (n=12) Mean	S. Error	t
1.	A	5.17	.35	5.25	.41	-.16
2.	B	5.00	.67	4.75	.63	.27
3.	C	3.33	.48	5.00	.33	-2.87**
4.	E	5.42	.40	4.92	.51	.77
5.	F	4.75	.46	4.50	.47	.38
6.	G	3.83	.37	4.08	.29	-.54
7.	H	5.33	.36	5.42	.47	-.14
8.	I	4.75	.31	5.17	.41	-.82
9.	L	7.00	.28	5.75	.41	2.53*
10.	M	4.33	.33	4.08	.42	.47
11.	N	5.67	.41	6.42	.57	-1.06
12.	O	6.17	.64	6.00	.39	.22
13.	Q_1	5.25	.37	5.42	.42	-.30
14.	Q_2	4.92	.54	5.25	.51	-.45
15.	Q_3	4.75	.41	4.58	.31	.32
16.	Q_4	7.42	.42	6.58	.40	1.45

** Significant at the .01 level.

* Significant at the .05 level.

TABLE 3

t-TEST BETWEEN THE PERSONALITY FACTORS OF THE HIGH AND LOW ABILITY GROUPS - POST SEASON

	Variable	High Group (n=12)		Low Group (n=12)		t
		Mean	S. Error	Mean	S. Error	
1.	A	4.92	.40	4.92	.34	0.00
2.	B	5.42	.79	4.75	.72	.62
3.	C	4.00	.54	5.08	.50	-1.48
4.	E	6.42	.53	5.08	.42	1.98
5.	F	5.67	.50	4.33	.57	1.77
6.	G	4.17	.52	4.33	.43	-.25
7.	H	5.85	.37	5.33	.51	.79
8.	I	3.83	.32	5.08	.42	-2.37*
9.	L	6.50	.40	5.67	.47	1.36
10.	M	5.00	.55	4.92	.60	.10
11.	N	5.42	.36	5.92	.36	-.99
12.	O	6.42	.68	6.00	.52	.49
13.	Q_1	4.92	.53	5.50	.31	-.95
14.	Q_2	5.50	.60	5.33	.50	.22
15.	Q_3	4.58	.40	5.42	.42	-1.45
16.	Q_4	6.92	.57	5.75	.63	1.37

** Significant at the .01 level.

* Significant at the .05 level.

TABLE 4

t-TEST BETWEEN THE PRE AND POST PERSONALITY FACTORS - HIGH ABILITY GROUP

	Variable	Pre Test (n=12)		Post Test (n=12)		t
		Mean	S. Error	Mean	S. Error	
1.	A	5.17	.35	4.92	.40	.48
2.	B	5.00	.67	5.42	.79	-.40
3.	C	3.33	.48	4.00	.54	-.92
4.	E	5.42	.40	6.42	.53	-1.51
5.	F	4.75	.46	5.67	.50	-1.35
6.	G	3.83	.37	4.17	.52	-.52
7.	H	5.33	.36	5.83	.37	-.98
8.	I	4.75	.31	3.83	.32	2.07*
9.	L	7.00	.28	6.50	.40	1.03
10.	M	4.33	.33	5.00	.55	-1.04
11.	N	5.67	.41	5.42	.36	.46
12.	O	6.17	.64	6.42	.68	-.27
13.	Q_1	5.25	.37	4.92	.53	.52
14.	Q_2	4.92	.54	5.50	.60	-.72
15.	Q_3	4.75	.41	4.58	.40	.29
16.	Q_4	7.42	.42	6.92	.57	.71

** Significant at the .01 level.

* Significant at the .05 level.

TABLE 5

t-TEST BETWEEN THE PRE AND POST PERSONALITY FACTORS - LOW ABILITY GROUP

	Variable	Pre Test (n=12)		Post Test (n=12)		t
		Mean	S. Error	Mean	S. Error	
1.	A	5.25	.41	4.92	.34	.63
2.	B	4.75	.63	4.75	.72	.00
3.	C	5.00	.33	5.08	.50	-.14
4.	E	4.92	.51	5.08	.42	-.25
5.	F	4.50	.47	4.33	.57	.23
6.	G	4.08	.29	4.33	.43	-.48
7.	H	5.42	.47	5.33	.51	.12
8.	I	5.17	.41	5.08	.42	.14
9.	L	5.75	.41	5.67	.47	.13
10.	M	4.08	.42	4.92	.60	-1.15
11.	N	6.42	.57	5.92	.36	.74
12.	O	6.00	.39	6.00	.52	.00
13.	Q_1	5.42	.42	5.50	.31	-.16
14.	Q_2	5.25	.51	5.33	.50	-.12
15.	Q_3	4.58	.31	5.42	.42	-1.60
16.	Q_4	6.58	.40	5.75	.63	1.12

** Significant at the .01 level.

* Significant at the .05 level.

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